

What is claimed is:

1. A fiber reinforced plastic pipe reduced in thickness and increased in diameter by pultrusion process,
5 comprising

a fiber bundle spun and aligned in a longitudinal direction, and

circumferential reinforced fiber sheet provided at least either on an outer surface layer or on an inner
10 surface layer thereof.

2. A fiber reinforced plastic pipe reduced in thickness and increased in diameter by pultrusion process, comprising

15 a fiber bundle spun and aligned in a longitudinal direction, and

circumferential reinforced fiber sheet provided at least either on an outer surface layer or on an inner surface layer thereof, wherein

20 the pipe has a slit, capable of being reduced in diameter along the circumference, provided in the longitudinal direction, such that said fiber reinforced plastic pipe can be inserted into a metal pipe.

25 3. The fiber reinforced plastic pipe according to

claim 1 or 2, wherein

a tensile elasticity of fibers forming said fiber bundle is 196GPa or more.

5 4. The fiber reinforced plastic pipe according to claim 1 or 2, wherein

a tensile elasticity of fibers forming said circumferential reinforced fiber sheet is 58.8GPa or more.

10 5. The fiber reinforced plastic pipe according to claim 1 or 2, wherein

a basis weight (FAW) of said circumferential reinforced fiber sheet is in the range of 100g/m² to 600g/m².

15 6. The fiber reinforced plastic pipe according to claim 1 or 2, wherein

a thickness of said circumferential reinforced fiber sheet is in the range of 0.05mm to 1.0mm.

20 7. A power transmission shaft comprising a metal joint element and a metal pipe jointed to each other, wherein

the shaft further comprises a fiber reinforced plastic pipe inserted into said metal pipe, said fiber

reinforced plastic pipe being reduced in thickness and increased in diameter by pultrusion process, comprising a fiber bundle spun and aligned in a longitudinal direction, and circumferential reinforced fiber sheet provided at
5 least either on an outer surface layer or on an inner surface layer thereof.

8. A power transmission shaft comprising a metal joint element and a metal pipe jointed to each other,
10 wherein

the shaft further comprises a fiber reinforced plastic pipe inserted into said metal pipe, said fiber reinforced plastic pipe being reduced in thickness and increased in diameter by pultrusion process, comprising a
15 fiber bundle spun and aligned in a longitudinal direction, and circumferential reinforced fiber sheet provided at least either on an outer surface layer or on an inner surface layer, the pipe having a slit, capable of being reduced in diameter along the circumference, provided in
20 the longitudinal direction.

9. The power transmission shaft according to claim 8, wherein the slit has a width of 0.01% or more and 40% or less of the outer circumference thereof in a natural state.

10. The power transmission shaft according to claim 8 or 9, wherein said slit has a bias angle within ± 30 degrees with respect to an axial direction of said fiber reinforced plastic pipe.

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11. The power transmission shaft according to claim 8, wherein a value of D_1/D_2 is greater than 1 and equal to 1.3 or less, where D_1 is an outer diameter of said fiber reinforced plastic pipe and D_2 is an inner diameter of said metal pipe.

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12. The power transmission shaft according to claim 7 or 8, wherein

a tensile elasticity of fibers forming said fiber

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bundle is 196GPa or more.

13. The power transmission shaft according to claim 7 or 8, wherein

a tensile elasticity of fibers forming said

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circumferential reinforced fiber sheet is 58.8GPa or more.

14. The power transmission shaft according to claim 7 or 8, wherein

a basis weight (FAW) of said circumferential

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reinforced fiber sheet is in the range of 100g/m² to

600g/m².

15. The power transmission shaft according to claim 7
or 8, wherein

5 a thickness of said circumferential reinforced fiber
sheet is in the range of 0.05mm to 1.0mm.

16. The power transmission shaft according to claim 7
or 8, wherein

10 said fiber reinforced plastic pipe has a layered
structure of 20 layers or less.

17. The power transmission shaft according to claim 7
or 8, wherein

15 a value of FL/PL is 0.1 or more and 1.0 or less,
where PL is a length of said metal pipe and FL is a length
of said fiber reinforced plastic pipe.

18. The power transmission shaft according to claim 7
20 or 8, wherein

a value of t_2/t_1 is 0.01 or more and 10 or less,
where t_1 is a thickness of said metal pipe and t_2 is a
thickness of said fiber reinforced plastic pipe.

25 19. The power transmission shaft according to claim 7

or 8, wherein

said fiber reinforced plastic pipe is fixed to said metal pipe by reducing said metal pipe in diameter along the outer circumference by plastic-working, with said fiber
5 reinforced plastic pipe being inserted in said metal pipe.

20. The power transmission shaft according to claim 7 or 8, wherein

said fiber reinforced plastic pipe is fixed to said
10 metal pipe with an adhesive.

21. The power transmission shaft according to claim 20, wherein

a recessed portion for accommodating adhesive is
15 provided at least on any one of an outer circumference of said fiber reinforced plastic pipe or an inner circumference of said metal pipe.